

Work Order ID 127701

December-17-14 1:50:52 PM

127701

Page 1

Item ID: D5957 Accept ***N9000401.00*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle
 Start Date: 12/17/14 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 12/17/14 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: MLJ Date: 14-12-19 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D5957	Rev B

100 HAAS CNC VERTICAL MACHINING #1 0.00
100
 HAAS 1 Memo 0.00
 HAAS CNC vertical machine #1 1-Machine as per folio D5957, Ensure Batch Number is entered 2-Machine Keyway 3-Deburr & Tumble
PERFORMED BY CMM.
15-03-16

110 QC1- Inspect dimensions to dimension sheet 0.00
110
 QC Memo 0.00
 Quality Control
15/03/19

120 QC8- Inspect parts - second check 0.00
120
 QC Memo 0.00
 Quality Control
15/03/21

DAS
08
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Work Order ID 127701

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127701

Page.2

Item ID: D5957 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle
 Start Date: 12/17/14 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 12/17/14 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Chemical Conversion Coat per QSI005 4.1	0.00							
130									
HandFinish	Memo	0.00							
Hand Finishing									
140	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
140									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: <u>3:30</u> OVEN TEMPERATURE: <u>100</u> FINISH TIME: <u>4:00</u>								
150	QC3- Inspect Part Finish	0.00							
150									
QC	Memo	0.00							
Quality Control									

4 15-3-23

H 15-3-23

(4) DAS 38 9-89

MAR 24 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

Work Order ID 127701

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127701

Page 3

Item ID: D5957

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Saddle

Stop ***NS2***

Start Date: 12/17/14 Start Qty: 4.00

4

Cust Item ID:

Required Date: 12/17/14 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Identify as per dwg & Stock Locations	0.00							
160									
Packaging	Memo	0.00							
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.00							
Quality Control									

DAS
26
9-89

MAR 24 2015

15/3/26

ME
15-3-24

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Picklist Print

December-17-14 1:50:52 PM

Page 1

Work Order ID: 127701

127701

Parent Item: D5957

D5957

Parent Item Name: Saddle

Start Date: 12/17/14

Required Date: 12/17/14

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:E Re-Format 05-11-29 JLM
IPP Rev:F ecn826 06.12.06 ec

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-007		Manufactured	No			110	Each	60.0000	1	4			

D6101-007

Saddle Billet

Location

Loc Qty

Loc Code

MAT041

1

121646

1

MAT044

59

114363

12

116083

25

119005

2

120494

19

76839

1

JP 15-03-14

4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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DART AEROSPACE LTD		Work Order:	127701
Description: Inner Aft Saddle		Part Number:	D5957
Inspection Dwg: D5957	Rev: B	Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing and record below:

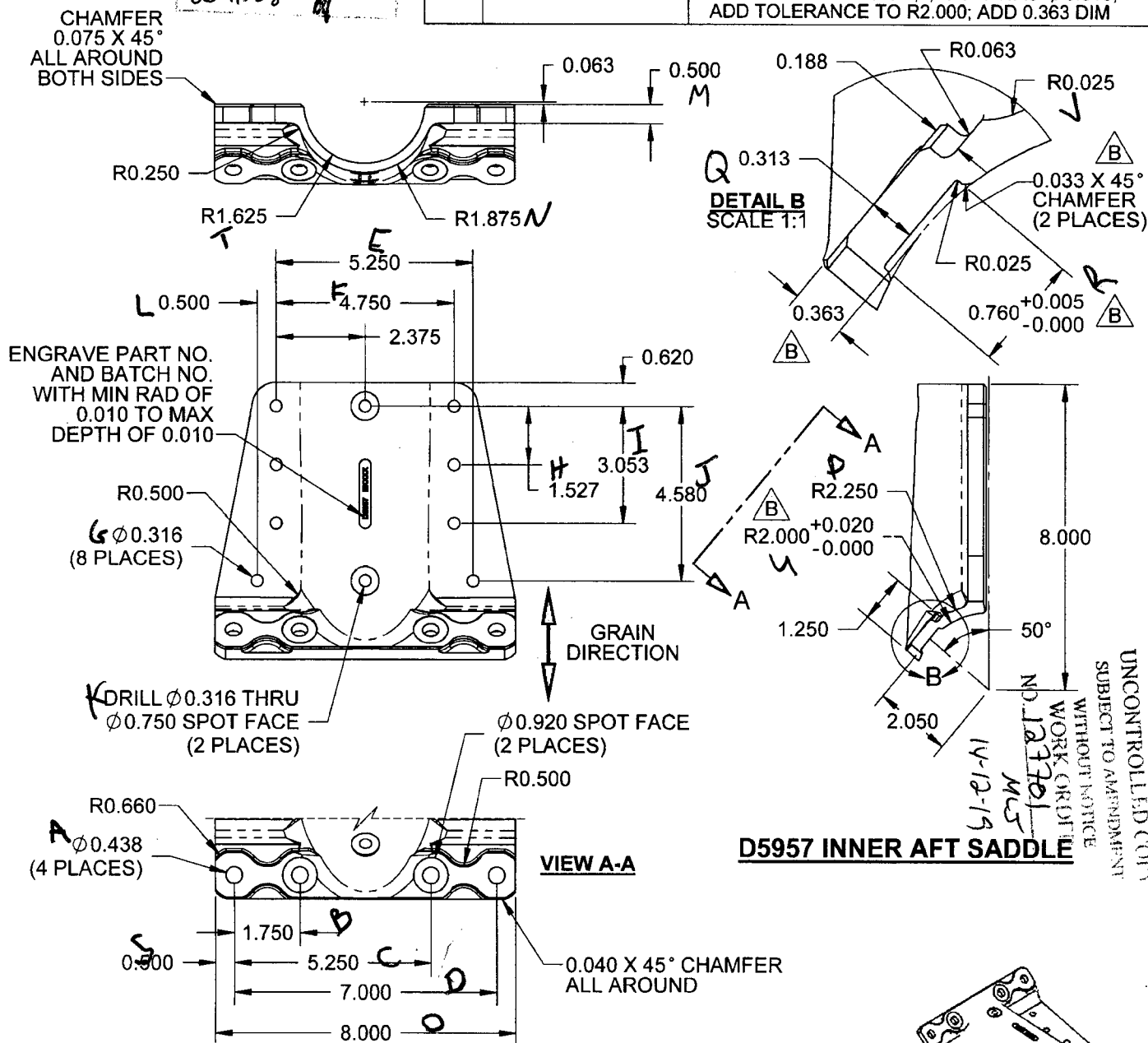
Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.438	0.443		.438	.438	.438	.438		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	5.245	5.255		5.250	5.250	5.250	5.250		
D	6.995	7.005		7.000	7.000	7.000	7.000		
E	5.240	5.260		5.250	5.250	5.250	5.250		
F	4.745	4.755		4.750	4.750	4.750	4.750		
G	0.315	0.322		.316	.316	.316	.316		
H	1.522	1.532		1.527	1.527	1.527	1.527		
I	3.048	3.058		3.053	3.053	3.053	3.053		
J	4.575	4.585		4.580	4.580	4.580	4.580		
K	0.315	0.322		.316	.316	.316	.316		
L	0.495	0.505		.500	.500	.500	.500		
M	0.490	0.510		.493	.494	.495	.500		
N	1.865	1.885		1.875	1.875	1.875	1.875		
O	7.990	8.010		7.998	7.999	7.997	7.999		
P	2.240	2.260		2.250	2.250	2.250	2.250		
Q	0.308	0.313		.308	.308	.310	.311		
R	0.760	0.765		.761	.761	.761	.761		
S	0.490	0.510		.500	.500	.500	.500		
T	1.625	1.645		1.628	1.636	1.631	1.634		
U	2.000	2.020		2.000	2.000	2.000	2.000		
V	0.023	0.043		.040	.040	.040	.040		
W									
X									
Y									
Z									
AA									
AB									
AC									
AD									
AE									
AF									
Accept/Reject									

Measured by: <i>[Signature]</i>	Audited by: <i>[Signature]</i>	DAS
Date: 15-03-16	Date: 15/03/21	08
		9-89

Rev	Date	Change	Revised by	Approved
A	99.04.19	New Issue	RF	
B	02.12.13	Reformat; Added Dim. T-U & DT8682, DT8686 & DT8696 A/B	KJ/RF	
C	06.11.20	Added dimension V	KJ/JLM	
D	06.12.06	Dimensions L,N,P revised	KJ/EC	
E	07.06.15	Dimension G revised	KJ/JLM	
F	08.04.21	Dimension E revised	KJ/DD	
G	08.09.05	Dimension K revised	KJ/DD	
H	09.07.29	Dimension Q revised	KJ	<i>[Signature]</i>

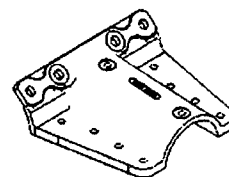


DESIGN BW	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED LE	APPROVED [Signature]	DRAWING NO. D5957	REV. B SHEET 1 OF 1
DATE 06.11.07	TITLE INNER AFT SADDLE SCALE 1:4		
REV	DATE	DESCRIPTION	
A	97.05.06	NEW ISSUE	
B	06.11.07	INCORPORATE DEO 9102, DEO 9079; ADD 0.363 DIMENSION; $\phi 0.316$ WAS $\phi 0.313$; ADD TOLERANCE TO R2.000; ADD 0.363 DIM	



NOTES:

- 1) MATERIAL: ALUMINUM 7075-T7351 PER QQ-A-250/12
(MAKE FROM D6101-007 SADDLE BILLET, 7075)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES 0.010 TO 0.020



ISOMETRIC VIEW
SCALE 1:8

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Part Number: D5957	Rev: B	- Page 1 -
Description: INNER AFT SADDLE	Inspection Dwg: D5957	Work Order: 127701

Name	Nominal	Upper Tol Lower Tol	No. Piece_4 Actual	No. Piece_3 Actual	No. Piece_2 Actual	No. Piece_1 Actual	
A Diameter	0.4380	0.0050 0.0000	0.4382	0.4378	0.4383	0.4381	
B Distance XY	1.7500	0.0050 -0.0050	1.7506	1.7497	1.7495	1.7502	
C Distance XY	5.2500	0.0050 -0.0050	5.2509	5.2494	5.2493	5.2499	
D Distance XY	7.0000	0.0050 -0.0050	6.9991	6.9984	6.9981	6.9984	
E Distance ZX	5.2500	0.0100 -0.0100	5.2469	5.2473	5.2478	5.2469	
F Distance XY	4.7500	0.0050 -0.0050	4.7466	4.7471	4.7468	4.7481	
G Diameter	0.3160	0.0060 -0.0010	0.3154	0.3153	0.3161	0.3159	
H Distance XY	1.5270	0.0050 -0.0050	1.5270	1.5270	1.5269	1.5276	
I Distance XY	3.0530	0.0050 -0.0050	3.0534	3.0530	3.0539	3.0540	
J Distance YZ	4.5800	0.0050 -0.0050	4.5808	4.5803	4.5809	4.5810	
K Diameter	0.3160	0.0060 -0.0010	0.3155	0.3154	0.3162	0.3158	
L Distance ZX	0.5000	0.0050 -0.0050	0.5001	0.5007	0.5003	0.5006	
M Distance YZ	0.5000	0.0100 -0.0100	0.4951	0.5027	0.4994	0.4952	
O Distance XY	8.0000	0.0100 -0.0100	7.9976	7.9984	7.9976	7.9976	
S Distance XY	0.5000	0.0100 -0.0100	0.4987	0.4987	0.4985	0.4991	

Measured by:
Mathieu Lamarche

Date:
2015-3-19

Audited by:

DAS
08
9-89

Date:

15/03/21